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ENVIRONMENTAL PRIORITIES INITIATIVE
VISUAL SITE INSPECTION REPORT
FOR
SUN CHEMICAL CORPORATION
NEWARK, NEW JERSEY
EPA ID NO. NJD002458842

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I. EXECUTIVE SUMMARY

The EPA's Environmental Priorities Initiative (EPI) utilizes an integrated approach between CERCLA and RCRA to ensure that the most environmentally significant facilities and sites are given a priority for clean up. As part of this Initiative, in June 1989 a Preliminary Assessment (PA) Report was prepared by NUS Corporation on the Sun Chemical Corporation (Sun) facility for U.S. EPA Region II. The PA encompassed a file material review and a drive-by inspection. The PA Report recommended No Further Remedial Action Planned (NFRAP) due to the minimal environmental impact associated with the operation of the facility. On March 25, 1992, A.T. Kearney, Inc. conducted a Visual Site Inspection (VSI) to confirm the findings of the PA Report, to identify additional Solid Waste Management Units (SWMUs) or areas of concern (AOCs), and to evaluate the appropriateness of the NFRAP recommendation.

The VSI confirmed the former presence of a hazardous waste storage tank at the Sun site as identified in the PA Report. Additionally, six other SWMUs were identified during the VSI. The VSI also confirmed the location of AOC A, the Acetic Acid Spill. No additional AOCs were identified during the VSI. All SWMUs and the AOC present a low potential for release to the environment. During the VSI, sound waste management practices were noted and the facility was in good repair. Therefore, based on the findings of the VSI, the PA Report's recommendation of NFRAP for this facility is confirmed.

II. SITE DESCRIPTION

The Sun Chemical Corporation (Sun) facility is located at 185 Foundry Street in Newark, New Jersey (Figure 1). The site is approximately one-half acre in size and is located in an industrial section of Newark. The facility is bounded to the east by Foundry Street, while three separate firms own property on the remaining sides of Sun Chemical.

The facility has been in operation at the site since the late 1960s and is involved exclusively in the manufacture of organic pigments. Production volume in the 1960s was limited as the facility operated similar to a pilot plant. By the middle of the 1970s, production increased as the facility moved to full-scale operations. The pigments produced at the facility are used in the automotive and plastics industries. There are four buildings on the site (Figure 2). The buildings house the administration area, manufacturing process areas, and a quality control laboratory.

The site was originally part of a larger complex (circa 1910) that encompassed several acres along Foundry Street including adjoining properties. The complex was divided into parcels and sold to various owners around 1950. The original owner of the Sun site may have been Diamond Company. Specifics on the operations at the site prior to the late 1960s, when Sun Chemical first started using the site, are unknown.

In 1987, Sun Chemical Company was acquired by a Japanese firm and the company was known on an interim basis for legal purposes as the Sun/DIC Acquisition Company. In 1989, the company resumed use of the Sun Chemical Corporation name. The facility is currently owned by the DIC Corporation. In December 1990, the facility property was purchased from the Foundry Street Corporation.

The raw materials used to produce the color pigments onsite are water, polyphosphoric acid (high concentration acid), methanol, and DiAnilino Ptherethalic Acid (DATA) or diparatohredino terephthalic acid (DTTA). To manufacture a pigment, DATA (solid) and polyphosphoric acid are mixed in a tank. When the reaction is complete this material is pumped into an agitated tank of methanol or water, depending on the desired product. The DATA and polyphosphoric acid mixture react in the water or methanol tank to form quinacridone, a precipitate, which is the pigment or product. The pigment is a slurry that is pumped to a filter press.

The process generates either a waste stream of water and phosphoric acid or a waste stream of water, phosphoric acid, and methanol, depending on the raw materials used. Additional wastewater is removed from the pigment in a filter press. Waste

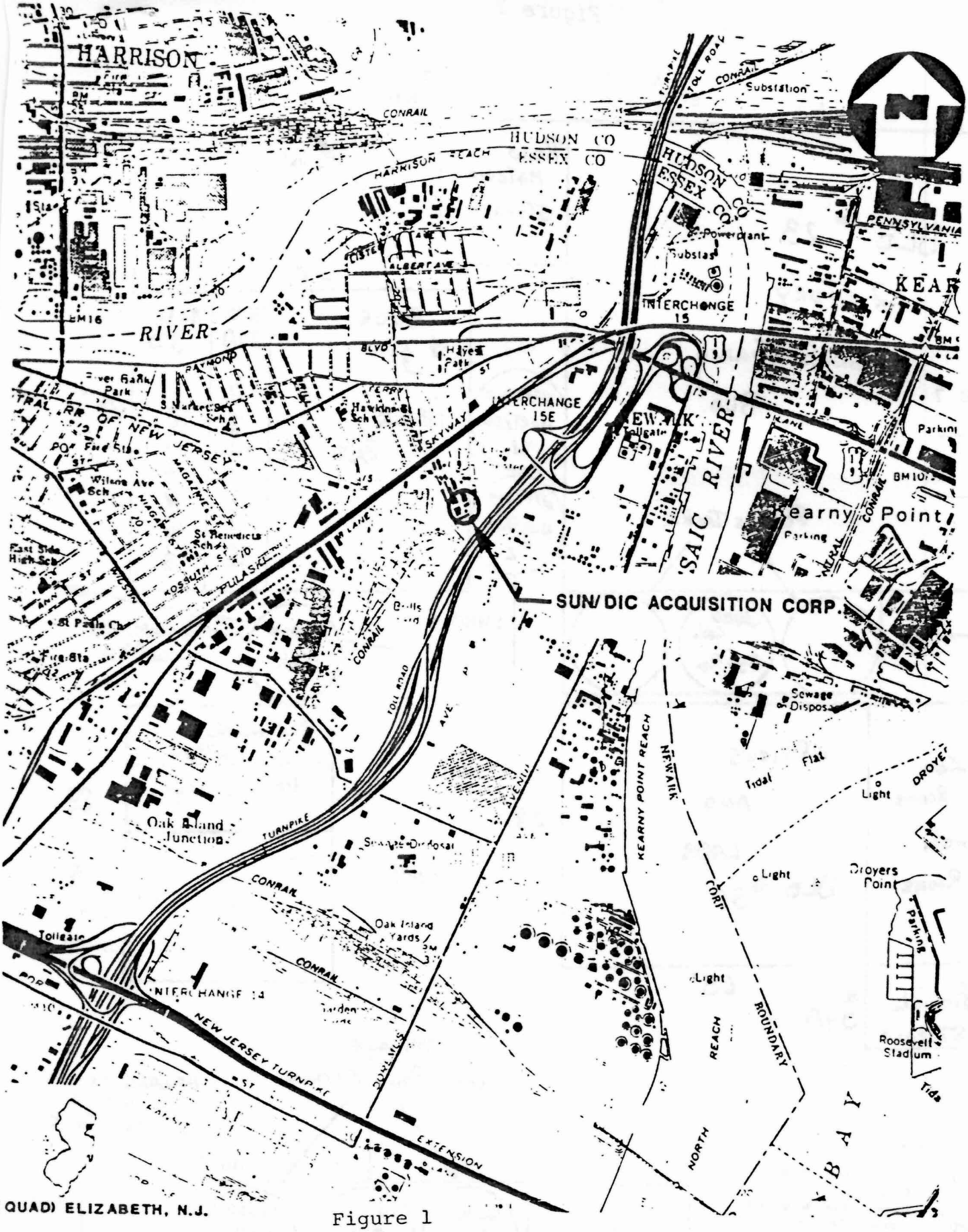


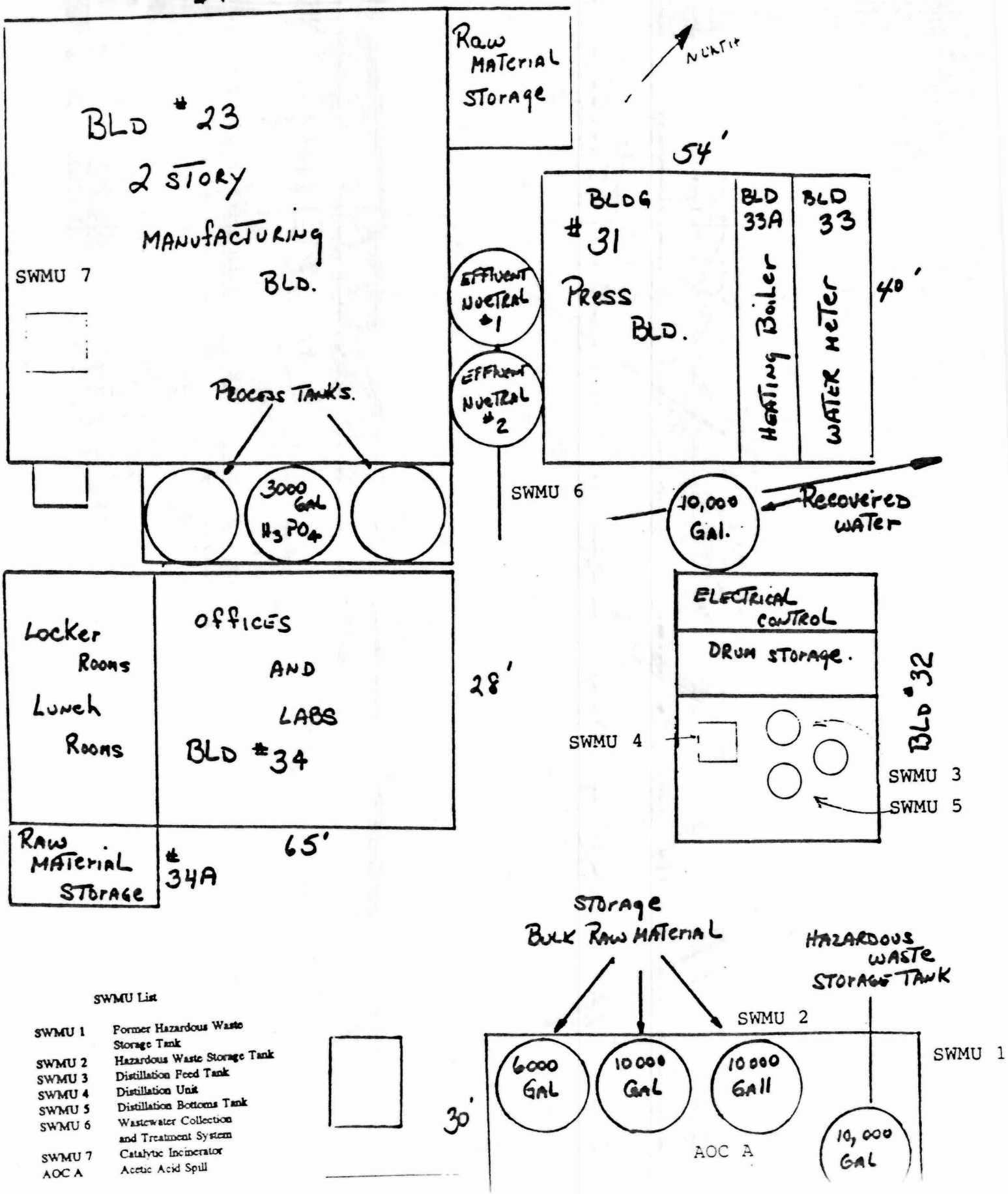
Figure 1

SITE LOCATION MAP

SUN/DIC ACQUISITION CORP., NEWARK, N.J.

Figure 2

Facility Layout and
SWMU and AOC Location Map



SWMU List

SWMU 1	Former Hazardous Waste Storage Tank
SWMU 2	Hazardous Waste Storage Tank
SWMU 3	Distillation Feed Tank
SWMU 4	Distillation Unit
SWMU 5	Distillation Bottoms Tank
SWMU 6	Wastewater Collection and Treatment System
SWMU 7	Catalytic Incinerator
AOC A	Acetic Acid Spill

water resulting from the filtration of a methanol batch is directed to the Hazardous Waste Storage Tank (SWMU 2). Filtration from a water batch is directed to the Wastewater Collection and Treatment System (SWMU 6). The dewatered pigment is removed from the filter press, placed on trays, and heated in an oven to drive off any remaining moisture. The ovens vent to the Catalytic Incinerator (SWMU 7) which discharges to the atmosphere. The dried pigment is drummed in metal or fiber drums for shipment offsite.

All wastewater generated onsite, which predominantly consists of process effluent, is discharged to the Wastewater Collection and Treatment System (SWMU 6). The discharge is monitored for pH, temperature, and BOD. Treated wastewaters are discharged to the local POTW, the Passaic Valley Authority (PVA) under an authority permit. Sanitary wastewaters are discharged to a separate system.

In 1982, the facility decided to send the polyphosphoric acid and methanol-containing process effluent offsite as a cost saving measure. The process effluent was stored in the Former Hazardous Waste Storage Tank (SWMU 1). The tank is reported to have been drained every 90 days or less. The methanol is reported to have been distilled from the wastewater. Sun maintained this arrangement until 1986, when the offsite company increased the price tenfold. After the price increase, Sun reinstated and continues the onsite process of neutralizing the process effluent prior to discharge to the local POTW.

In 1989, Sun purchased a Distillation Unit (SWMU 4) to recover methanol from the process effluent. The unit was operational by June 1989. The distillation process produces methanol and generates a phosphoric acid wastewater. The methanol is collected in a small tank near the distillation unit and then pumped to a 10,000-gallon tank in the southeast section of the site. The methanol is re-used as a raw material. The phosphoric acid wastewater "bottoms" are collected in the Distillation Bottoms Tank (SWMU 5). This waste stream is pumped to the Wastewater Collection and Treatment System (SWMU 6). Approximately 5,000 gallons of effluent yields 2,000 to 3,000 gallons of methanol.

Prior to 1987, a pigment was produced at Sun using acetic acid to produce red pigment. This process ceased in 1986 and acetic acid is no longer used onsite. Isopropyl alcohol and ethanol were formerly used as the precipitating solution in the process. These chemicals were replaced by methanol.

Regulatory History

Sun filed a Notification of Hazardous Waste Activity in August 1980. The waste identified as being generated was F005. A Part

A Application was submitted by Sun in November 1980. This application identified the onsite storage and treatment of hazardous waste in tanks. The waste identified as being treated in a tank was D002.

Sun requested that the New Jersey Department of Environmental Protection and Energy (NJDEPE) reclassify the facility as a generator only. Sun noted that it did not store hazardous wastes greater than 90-days at any time and that treatment conducted onsite is elementary neutralization of wastewaters, a RCRA-exempt activity. Consequently, on April 11, 1986 the Sun facility was reclassified as generator only status by NJDEPE.

Sun has several air permits for manufacturing process equipment and an industrial wastewater discharge permit covering discharges to the local sanitary sewer, which flows to the local POTW.

III. SOLID WASTE MANAGEMENT UNITS IDENTIFIED IN THE PRELIMINARY ASSESSMENT

A Preliminary Assessment (PA) Report on Sun Chemical Corporation was prepared in June 1989 by NUS Corporation. The PA Report was based on information gathered from the files of the U.S. EPA and the New Jersey Department of Environmental Protection and Energy (NJDEPE) and on observations noted during a drive-by inspection performed on June 8, 1989. The report identified one hazardous waste storage tank as a SWMU. A VSI was performed on March 25, 1992 by A.T. Kearney, Inc. to confirm the findings of the PA Report. Information on Sun Chemical Corporation was provided by Mr. Matthew Freestone, Mr. Anthony Tedesco, and Mr. Robert Sharkey.

SWMU 1 - Former Hazardous Waste Storage Tank

No Photograph

This hazardous waste storage tank is no longer onsite. When active, the tank was located in the southwest corner of the site, within a secondary containment system. The tank had a 10,000 gallon capacity, was constructed of fiberglass, and stored production process effluent comprised of methanol and phosphoric acid waste. The tank was operational from 1981 to 1986. The containment system in which the tank was located is three feet high, 61-feet long and 29-feet wide. Also located in the containment system at the time the tank was operating were four raw materials storage tanks. The VSI established that this SWMU is no longer in existence and was cleaned, disassembled and disposed of in accordance with a 1985 closure plan. According to a facility representative, no spills or releases occurred from this unit. In addition, no evidence of a release was noted at the time of the VSI.

IV. AREAS OF CONCERN IDENTIFIED IN THE PRELIMINARY ASSESSMENT

The PA Report prepared in June 1989 by NUS Corporation identified an area near the Former Hazardous Waste Storage Tank where a spill occurred on October 11, 1984 as an area of concern (AOC) at the Sun Chemical Corporation facility. A VSI was performed on March 25, 1992 by A.T. Kearney, Inc. to confirm the findings of the Preliminary Assessment.

AOC A - Spill Area

No Photograph

On October 11, 1984, a tank regulator failed causing a spill of 20 gallons of acetic acid into the containment system for raw material tanks and the Former Hazardous Waste Storage Tank (SWMU 1). During the VSI, a facility representative explained that the spill was neutralized with caustic, pumped out of the containment system to the Wastewater Collection and Treatment System (SWMU 6), and treated in the wastewater treatment facility. During the VSI, no evidence of a release was noted in the area of the spill.

V. SOLID WASTE MANAGEMENT UNITS IDENTIFIED DURING THE VISUAL SITE INSPECTION

Six additional SWMUs were identified during the VSI on March 25, 1992. These include a temporary hazardous waste storage tank, a distillation unit, a distillation unit feed tank, a distillation unit waste storage tank, a catalytic incinerator, and a wastewater collection and treatment system.

SWMU 2 - Hazardous Waste Storage Tank

Photograph No. 1

This storage tank is located in the southeast corner of the site and was built in 1982. It is a 10,000 gallon tank measuring 30-feet by 15-feet with an overhead piping system for loading and unloading. The process effluent mixture of waste methanol and phosphoric acid is stored in the tank prior to discharge to the Distillation Feed Tank (SWMU 3). The wastewater is stored in the tank for less than 90 days. The unit is constructed of carbon steel and is equipped with a methanol overfill protection system. The unit is located within a concrete containment system that is 30-feet wide, 60-feet long, and three feet high. The unit was noted to be in good condition at the time of the VSI. According to facility representatives, the unit has no reported history of release.

SWMU 3 - Distillation Feed Tank

Photograph No. 3

The unit is located north of the main administration building and east of the Distillation Unit (SWMU 4). The unit is a 1,000-gallon tank constructed of stainless steel and supported on steel legs. Process effluent from the Hazardous Waste Storage Tank (SWMU 2) is held in this tank and pumped to the Distillation Unit (SWMU 4) where methanol is separated from phosphoric acid and water. The unit is located in the same concrete containment system as the Distillation Unit. The containment system is comprised of a concrete base and three feet high concrete walls. The tank was noted to be in good condition and no evidence of release was noted at the time of the VSI. According to facility representatives, the tank has no reported history of release.

SWMU 4 - Distillation Unit

Photograph Nos. 2 and 3

This unit is located north of the main administration building and west of the Distillation Feed Tank (SWMU 3). The unit is constructed of stainless steel, has a capacity of 330 gallons, and is approximately 30 feet high. The unit receives process effluent from the Distillation Feed Tank which contains water, methanol, and phosphoric acid. The distillation process involves the heating of the effluent and the separation of methanol from phosphoric acid and water. The "tops" of the distillation

process is composed of methanol, which is directed to a tank and reused onsite. The "bottoms" consist of phosphoric acid and water which is directed to the Distillation Bottoms Tank (SWMU 5).

The distillation unit is located within a concrete containment system consisting of a concrete base and three foot high walls. The Distillation Feed Tank (SWMU 3), the recovered methanol tank, and the Still Bottoms Tank (SWMU 5) are also located within this containment system. The unit operates under an air permit from the NJDEPE. The unit and the containment system appeared to be in good condition at the time of the VSI. According to facility representatives, the tank has no reported history of release.

SWMU 5 - Distillation Bottoms Tank — Photograph Nos. 2 and 3

This unit is located northeast of the administration building and is adjacent to the Distillation Unit (SWMU 4). The tank is constructed of carbon steel and has a capacity of 700 gallons. The tank receives phosphoric acid wastewater from the Distillation Unit which is then pumped to the Wastewater Collection and Treatment System (SWMU 6) where it is neutralized prior to discharge to the POTW. The unit is located in the same concrete containment structure as the Distillation Unit. The containment structure is constructed of three feet high walls with a concrete base. The tank was noted to be in good condition and no evidence of release was noted at the time of the VSI. According to facility representatives, the tank has no reported history of release.

SWMU 6 - Wastewater Collection and Treatment System
Photograph Nos. 4, 5, 7 and 8

The Wastewater Collection and Treatment System is comprised of overhead two to six inch steel piping, in-floor and exterior steel lined trenches, and two treatment (i.e., neutralization) tanks. These tanks are located immediately north of the main processing building and are approximately 10 feet high and five feet in diameter. The tanks are constructed of stainless steel with a capacity of 1,500 gallons each. The tanks are supported by steel beams and steel legs, one and one-half feet above concrete paving.

The System receives wastewater from the processing tanks, filter presses, and washdown waters from the cleanup of vessels within the facility. The wastewaters are directed to the Hazardous Waste Storage Tank (SWMU 2) if the filter press or vessels were cleaned using methanol. The methanol-containing wastewaters are then distilled to remove the methanol, and the resultant "distillation bottoms" are transferred to this System via the Distillation Bottoms Tank (SWMU 5) . If no methanol was used in the pigment production process, wastewaters are discharged

directly to the two neutralization tanks. The pH of the wastewater is monitored and adjusted in the neutralization tanks. A liquid caustic is used to neutralize the acidic wastewaters prior to discharge to the Passaic Valley Authority (PVA) sewer system. The discharge from the tanks to the sewer system is permitted by the PVA. Minor exterior corrosion of the neutralization tanks and underlying concrete was noted at the time of the VSI. However, there was no evidence of a release. According to facility representatives, the unit has no reported history of release.

SWMU 7 - Catalytic Incinerator Photograph No. 6

The incinerator is located on the roof of the two story main processing building. The incinerator is approximately 20-feet long, 12-feet high, and 5-feet wide. It is constructed of welded stainless steel and has a 6 feet tall steel stack. The incinerator receives vapors from the ovens used to dry the pigment after it has been removed from the filter presses. Facility representatives indicated that the emissions from the ovens are predominantly water vapor. The unit is supported on a steel beam structure. The unit is permitted under a NJDEPE permit and appeared to be in good condition at the time of the VSI.

VI. AREAS OF CONCERN IDENTIFIED DURING THE VISUAL SITE INSPECTION

There were no additional areas of concern identified during the VSI conducted on March 25, 1992.

VII. CONCLUSIONS

The Preliminary Assessment Report resulted in the identification of one SWMU, the Hazardous Waste Storage Tank (SWMU 1), that has been removed. This SWMU was noted to have had minimal potential for release to the environment, due to appropriate engineering controls and waste management practices.

Six additional SWMUs were identified during the VSI for a total of seven SWMUs. A summary of the units is presented in Table 1. All units were noted at the time of the VSI to be in good condition and to have minimal potential for release to the environment due to appropriate engineering controls and waste management practices. Three SWMUs have permitted discharges. The Wastewater Collection and Treatment System (SWMU 6) is permitted to discharge to the local POTW. The Distillation Unit (SWMU 4) and the Catalytic Incinerator (SWMU 7) discharge to the atmosphere per requirements of NJDEPE air permits.

One AOC was identified in the PA Report, which was a spill of acetic acid. According to facility representatives, the spill occurred within a concrete containment system and was immediately cleaned. Due to the adequate remediation of the spill, the spill area presents no further environmental concern.

The Sun Chemical Corporation facility was noted at the time of the VSI to be well organized and appeared to have clear, consistent, and appropriate methods to manage hazardous materials. Hazardous materials and hazardous wastes are handled inside and outside the facility buildings over concrete or asphalt paved surfaces. Wastewater discharges from the facility are monitored under the provisions of an industrial discharge permit administered by the PVA. Releases to the air at the facility are regulated under the provisions of several unit-specific NJDEPE air permits. Based on the findings of the VSI and the PA Report, it appears that there is minimal potential for release of hazardous constituents to the environment from the identified SWMUs and AOCs at the facility. The recommendation of NFRAP for Sun Chemical Corporation is confirmed.

Table 1

Sun Chemical Solid Waste Management Units and Areas of Concern Summary

UNIT NUMBER AND NAME	STATUS	SUMMARY/COMMENTS
SWMU 1 - Former Hazardous Waste Storage Tank	E	The unit was removed in 1986. The unit had adequate controls and no reported history of release. No evidence of release was noted during the VSI.
SWMU 2 - Hazardous Waste Storage Tank	C	The unit is located in a concrete containment system and has no reported history of release. During the VSI, the unit was noted to be in good condition. Wastes are stored for less than 90 days.
SWMU 3 - Distillation Feed Tank	C	The unit is constructed of stainless steel and is located within a concrete secondary containment system. During the VSI, the unit was noted to be in good condition.
SWMU 4 - Distillation Unit	C	The unit is located within a concrete containment system and was noted to be in good condition during the VSI. The unit discharges to the atmosphere under a permit issued by the NJDEPE.

Notes:

A - This unit incorrectly identified as a SWMU in the PA.
B - Unit currently operational, potential for release(s).
C - Unit currently operational, potential for release(s) minimal.
D - Unit not currently operational, potential for past release(s).
E - Unit not currently operational, potential for past release(s) minimal.
F - Remedial action(s) were conducted at this unit.

Table 1 (Continued)

Sun Chemical Solid Waste Management Units
and Areas of Concern
Summary

UNIT NUMBER AND NAME	STATUS	SUMMARY/COMMENTS
SWMU 5 - Distillation Bottoms Tank	C	The unit is located within a secondary concrete containment system and was noted to be in good condition at the time of the VSI. There is no reported history of release.
SWMU 6 - Wastewater Collection and Treatment System	C	The piping for the system is located overhead and the tanks are raised above ground level to facilitate the detection of leaks. No evidence of a release was noted during the VSI and the unit has no reported history of release.
SWMU 7 - Catalytic Incinerator	C	The unit was noted to be in good condition during the VSI and is permitted to discharge to the atmosphere by NJDEPE.
AOC A - Acetic Acid Spill	F	The spill was a one time occurrence and was adequately contained and remediated.

Notes:

A - This unit incorrectly identified as a SWMU in the PA.
B - Unit currently operational, potential for release(s).
C - Unit currently operational, potential for release(s) minimal.
D - Unit not currently operational, potential for past release(s).
E - Unit not currently operational, potential for past release(s) minimal.
F - Remedial action(s) were conducted at this unit.

VIII. REFERENCES

1. NUS Corporation, Final Draft Preliminary Assessment, Sun/DICAcquisition Corp., a.k.a. Sun Chemical Corporation, Newark, New Jersey, June 30, 1989.

2. A.T. Kearney, Inc., Visual Site Inspection Field Notes and Photographs, March 25, 1992.

3. A.T. Kearney, Inc., Visual Site Inspection Photograph Log, March 25, 1992.

Appendix A

Photograph Log

All photographs were taken at the Sun Chemical facility, between 9:30 a.m. and 12:30 p.m. on March 25, 1992 by Mr. Tim Sherwood of A.T. Kearney, Inc.

Photograph No. 1

View facing southeast of the Hazardous Waste Storage Tank (SWMU 2), far left. The Former Hazardous Waste Storage Tank (SWMU 1) was located to the left of the Hazardous Waste Storage Tank. The large white tank to the right contains methanol reclaimed onsite, and the middle tank contains purchased methanol. The small tank to the right is empty. It formerly held recovered methanol. Note red pigment stain is prevalent throughout the site. Standing water in the foreground is from recent snow and rainfall. The drums to the right of the containment area are damaged product drums.

Photograph No. 2

View facing north of the tanks at the Distillation Unit (SWMU 4). The blue tank on stilts to the far right is the Distillation Feed Tank (SWMU 3). The blue tank in the middle of the photograph contains the reclaimed methanol. The silver tank in the left foreground is Distillation Bottoms Tank (SWMU 5). The two drums to the left of the picture are empty. The black drums pictured are used for product packaging.

Photograph No. 3

View to the north of the Distillation Unit (SWMU 4). The reboiler is steam-jacketed. The Distillation Bottoms Tank (SWMU 5) is visible to the right.

Photograph No. 4

View facing west on the second floor of the main processing building of a portion of the Wastewater Collection and Treatment System (SWMU 6) and a filter press (left). The metal bin-like structures direct wastewater from the filter press to the Hazardous Waste Storage Tank (SWMU 2) for distillation or to the neutralization tanks for treatment prior to discharge.

Photograph No. 5

View of a floor drain, part of the Wastewater Collection and Treatment System (SWMU 6) located in the second floor of the main processing building.

Photograph No. 6

View facing west of the Catalytic Incinerator (SWMU 7) on top of the main processing building. The large brick building in the background is part of the old industrial complex located in the area.

Photograph No. 7

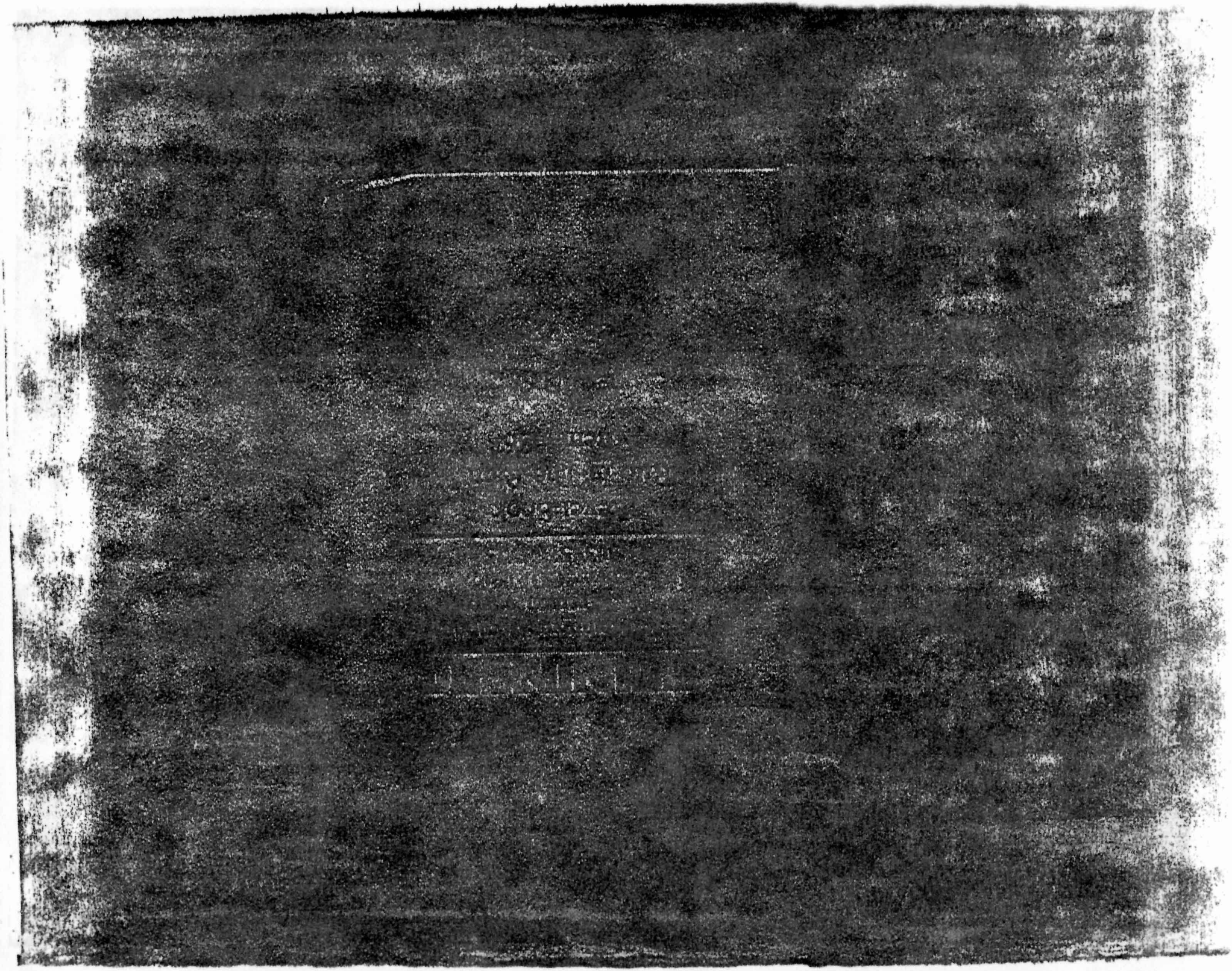
View facing northwest of one of the two neutralizing tanks which are part of the Wastewater Collection and Treatment System (SWMU 6).

Photograph No. 8

View of the base of one of the neutralization tanks, part of the Wastewater Collection and Treatment System (SWMU 6). Note cage-like support structure for tanks and exterior staining of tank and stained concrete.

Appendix B

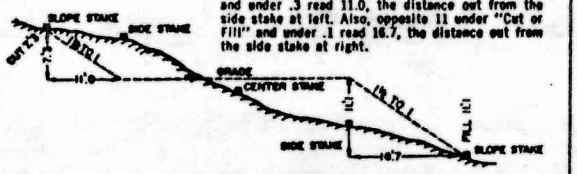
Visual Site Inspection Field Notebooks



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes 1½ to 1.

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Fill" and under .1 read 16.7, the distance out from the side stake at right.



Cut or Fill	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	Cut or Fill
	Distance out from Side or Shoulder Stake										
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
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29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
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40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

Peninsular Publishing Company
P.O. Box 5078 Tallahassee, FL 32314
(904) 576-4151

SUN CHEMICAL
NEWARK, NJ
NJD002458842

SITE VISIT
3/25/92

Pat Shanley
AT Kearney

3-25-92 (1) 3)

Arrive at
SUN CHEMICAL
9.00 am

MATT FREESTONE
TONY TEDESCO
ROBERT SHARKEY
from Sun Chemical press
Tim Sherwood
P. Shanley } ATK

(2)

3/25/92

Automotive Paint

Plastics

Permanent pigment

used in

That is the facility's only product

There are 3 color variations made

Asked facility if they were aware of a facility located nearby - same address - Grignard Chemical

3/25/92 31 Blanchard, Newark (3)

Norpack in Newark -

May own all property

Grignard Chemicals

Kyros chemical - [illegible]

1910 1911 major land owner

[illegible] [illegible]

[illegible] [illegible] Distribution

After [illegible] 1950s

[illegible], [illegible], [illegible]

185 Foundry St [illegible]

and they [illegible] [illegible] buildings

all w/same address

④ 3/25/92

1987
Aquisition Program
Was Sun Chemical Corp
Sold to DIC Corp
Transition Sun/DIC Corp

Then retook name Sun Chemical
but owned by DIC corporation

Property purchased 12/90

Bought from Foundry St
Corporation
approx 0.5 acres

3/25/92 ⑤

Mid 1960s started operations
- only made organic pigments

Raw Materials
3 of
1. Polyphosphoric Acid
high concentr. acid >100%

Intermediate Dry Pow.
(2) DATA/DITA(3)

4 Methanol

Basic Process
PolyPA dissolve in inter
rx → Quinacridone

(6) 3-25-92

~~we~~ must get out of solun-

precip out quin. by

pumping it into methanol

product ← quinacridone ← filter → effluent

3-25-92 (7)

2nd type of process

Pump material in water
& QUIN seper. (precip out)

violet methanol
red - water

1979 - POTW - Passaic Valley
Sewage Authority

TCI - permitted by POTW
pH 5-10.5 permitted (which is permitted by state)

must treat wastewater
pH adjustic
use caustic soda
50% liquid

(8) 3/25/92

until 1982

Realized lots being spent on caustic soda

found a company to create methanol / phosphoric acid - distilled off methanol

Industrial Chemicals

Solvents York Haven Penn

Paid .12 / gallon -

Would buy some off the methanol back that had been reclaimed by the offsite comp.

3-25-92 (9)

tbd to file as being TSD - operated as TSD from 1982 - 1986, offsite company raised prices by over 10X

N.J. - formerly requested Part B -

Filed for generator only status

draining tank every 90 days

Contingency plans submitted to NJ

Industrial Chem. increased cost by almost 10X -

Sun Chemical elected to neutralize on site → POTW

(10) 3-25-92

~ 10/88

Tried to distill methanol on site

in 1989 - bought distill unit

on line June '89 -

Started collecting - distill - reuse methanol

→ still bottoms (phos acid)

↓

caustic ~~soda~~

↳ POTW

3-25-92 (11)

This is current operation.

original - probably - neutralized w/caustic

Methanol / Phos. mixture stored in tank. Built in 1982

Stainless Steel 10,000 g

30' x 30'

~~the~~ 100,000 gallons / day

pH only monitored

once a month OCPSF

EPA list of 39 Pollutants

Requirement of POTW - since 6/91

1 sample MeCl -

(12) 3/25/92

probably result of Cl₂.
no MeCl used on site.

Press washings - residual acids,
salts

Filter Press → 5% Solid → product
→ liquid pH → POTW

Strength of BOD; methanol
increases BOD more BOD in wastewater
more costly for facility
still purchase methanol
why BOD content -

3/25/92 (13)

Product — wet product in water
wet cake
for water brine
system → Carlstadt
NJ → customer

Product Drying
↓
Dried to a lump
(fist size) -
to sister plant in S.I.
grind & package
send in 30 g. fiber, plastic or
steel drums.
barrels -

55 gallons
drums

Use tray dryers - stick in
oven; off trays to barrel

(14) 3/25/92

Emission control on oven

Catalytic incinerator - Since 1988
prior - released to atmosphere
predominately water vapor

may have cooling

A Permits -
Primary permits -
Storage tank permits
Vent of distillation column
Vent for equipment

3/24/92 (E)

5 Storage Tanks
1 Phos Acid
1 Pure Methanol
1 Rec Methanol
1 Effluent to Landfill
1 Caustic Soda
all diked, all have containment

Spill - 5,000 gallons effluent
per run or a 3000 g methanol

all water used on plant
is discharged to neutralization
system -
Industrial only -

 3/25/92

filter presses - water cooling

most water used is press washing

cooling water prefer to reuse.
several large tanks - to recycle the
water for cooling.

No drum waste routinely produced
over last 10 yrs - waste oil ~
20 drums - fixes, routine
machinery maintenance
oil change - collect oil →
under manifest to reclaimer

oil is not hazardous - the
facility's gear oil is not
hazardous - will soon drop
haz. classification

3/25/92

tractor trailers off load raw
materials to tanks
some raw materials
in drums rec'd onsite

Acetic acid spill onsite -
haven't used acetic acid
in 5-6 yrs. - spill was
contained in concrete containment

Red product - pump into water
remove water (filter)

Quinac - reactor to
form XLs recrs

into acetic
acid to make
product

(18) 3-25-92

acetic acid was problematic
process abandoned
non-methanol
Isopropanol's ethanol
used in past - can obtain
same results w/ methanol

2 tank reactors
3 tanks for precip
other tanks for holding only
& filter tanks

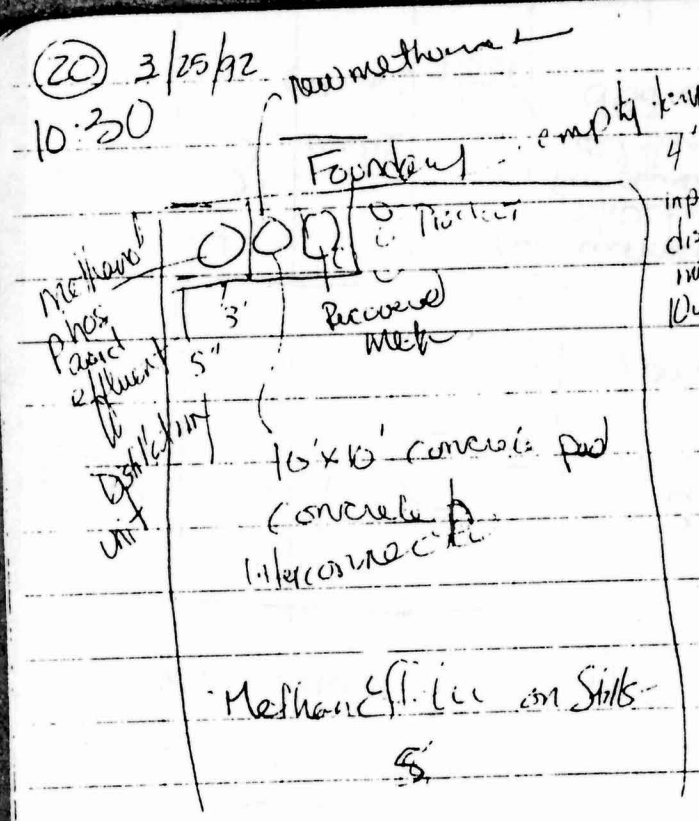
rinse water from tanks
to filter press -

3-25-92 (19)

10:10 - tour plant
Disposal of municipal
Inputs / surfactants
additive or mixture
mixtures

Day is cool - ~ 70°F
clear, slightly breezy

(20) 3/25/92
10:30

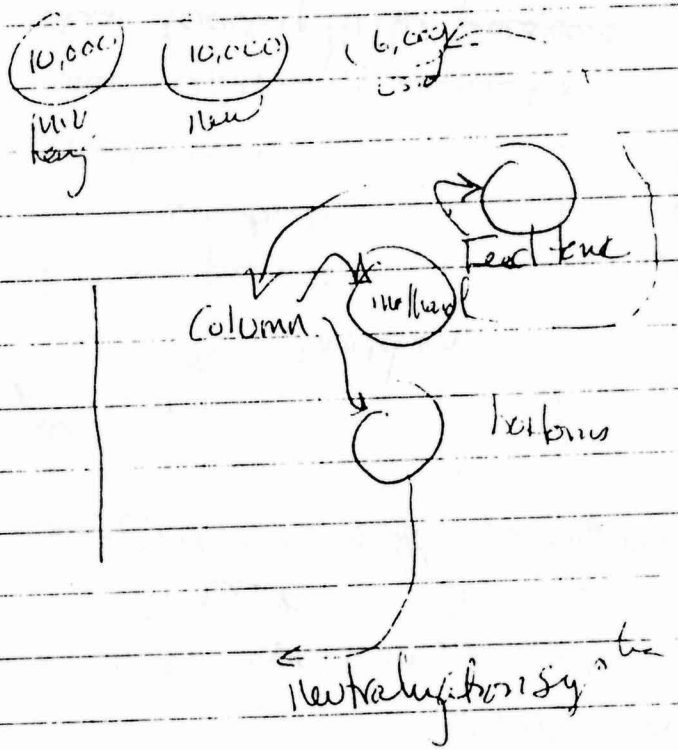


3/25/92 (21)

Haz. Waste 10,000 gal

Carbon steel for Methanol

Overfill protection

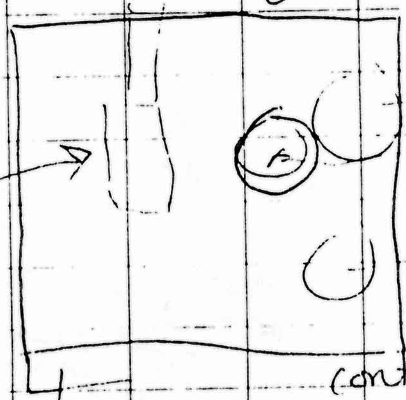


(22) Spran 3/25/92

effluent — Reboiler - steam jacketed; 330 gallon capacity

↑ vapor — Boil liquid — methanol

when reboiler full - phosphoric acid



3/25/92 (23)

2 10,000 gallon recovered water tanks / fiberglass

non contact 1 - cooling for filterpress

2nd floor - Reactor Building

2 filter presses

2 reactors

water can

When washing, neutralizing

when loading filter presses

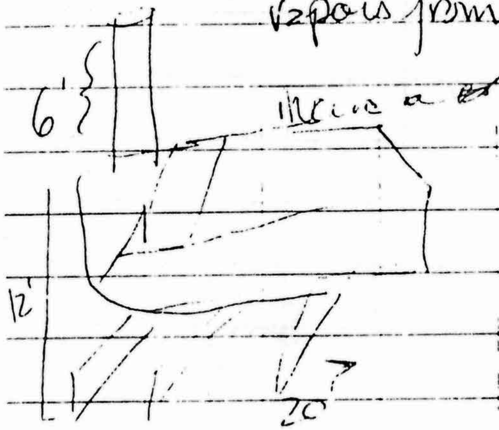
Collect effluent

When washing - neutralizing

very dark in building - filterpresses use cloth bags.

(22) (24) 3/25/92

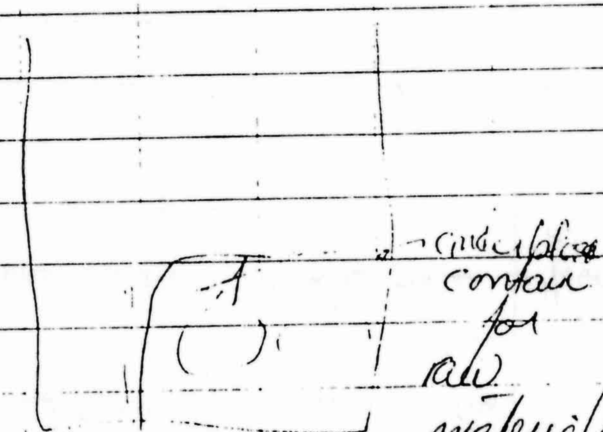
incinerator is on roof of building - receives vapors from ovens



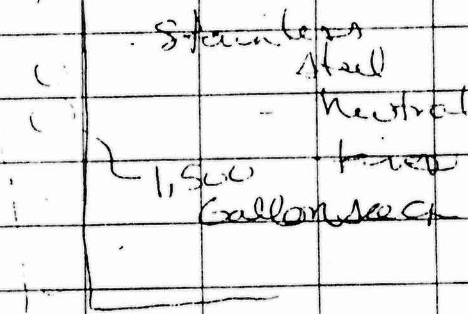
welded steel & stainless steel -

3/25/92 (25)

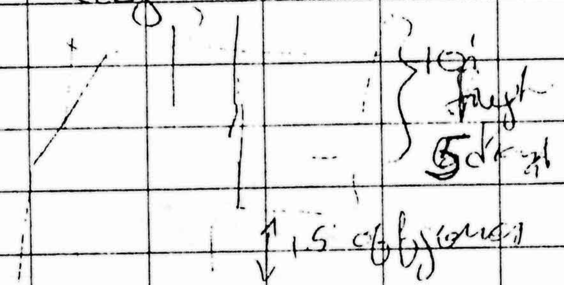
piping to & from tanks/distil overhead



(22) (26) 3/25/92



Cage



Neutraliz tanks off
ground in a cagelike
support

3/25/92 (27)

Between 2 buildings
[illegible]

Tanks [illegible] in series –
untreat
discharge from Tank 2

1120 return to site main office

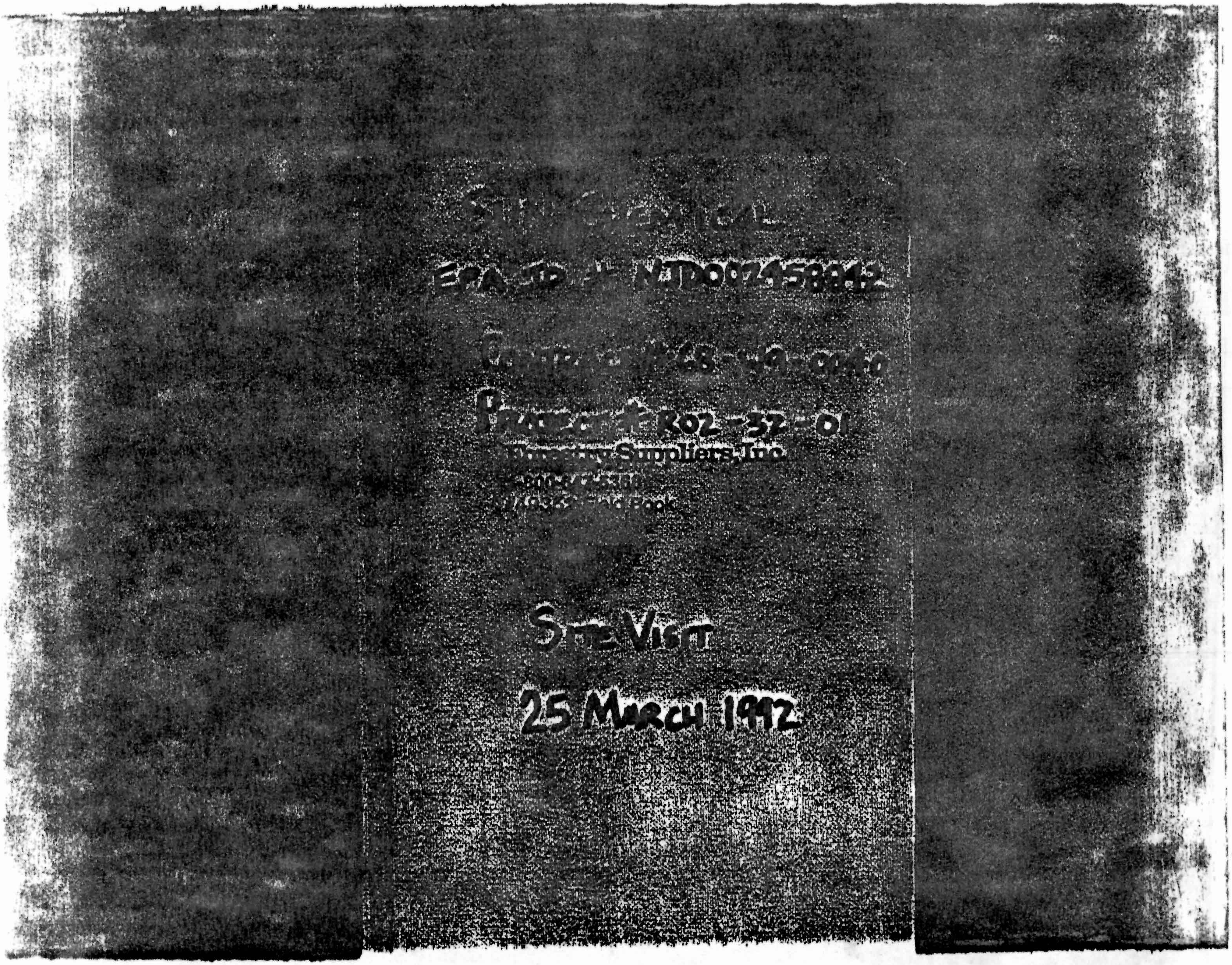
(22) 3/25/92 (78)

pH, acid, alcohol -
Closure plan for old tank
will be mailed
NN required - Closure of tank
fid.

Always had overhead lines
for all product & waste
transfer systems -

Leave site 1140 am

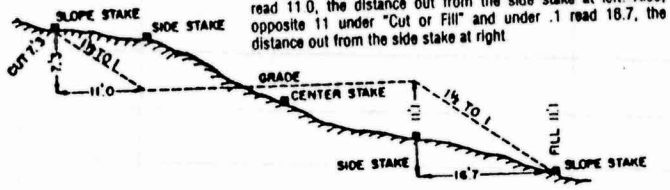
J Stanley 3/25/92


R02-32-01
Suppliers, Inc
SITE VISIT
25 MARCH 1992

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes 1½ to 1.

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Fill" and under .1 read 16.7, the distance out from the side stake at right



Cut or Fill	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	Cut or Fill
	Distance out from Side or Shoulder Stake										
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
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21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
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34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
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37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

SUN CHEMICAL
NEWARK, NJ

NJD002458842

SITE VISIT
25 MARCH 1992

TIM SHERWOOD
A.T. KEARNEY

CONTENTS

PAGE NO.	REFERENCE	DATE

3/25/92 SUN 001

0900 ARRIVED

0915 INTRO

ATTENDEES:

MATT FREESTONE
TONY TEDESCO
ROBERT SHARKEY
PAT SHANLEY
TIM SHERWOOD

BACKGROUND

COMPLEX BUILT IN 1913 (APPROX.)

ORIGINAL OWNER DIAMOND

SOLD IN PIECES AROUND 1950s

- ACQUISITION IN 1987
  SUN CHEMICAL CORP.

1 YEAR { TO SUN/DIC ACQUISITION CORP.
TO DIC CORP. (BUT RETOOK THE NAME SUN CHEMICAL CORP.)

- SITE APPROX. 1/2 ACRE

- OPERATIONS BEGAN IN THE MID-60's

- ONLY PROCESS:
  MAKING ORGANIC PIGMENT USED IN AUTOMOTIVES, PLASTICS, ETC.

RAW MATERIALS

- POLYPHOSPHORUS ACID
- D.A.I.A., D.T.T.A. (INTERMEDIARY)
- METHANOL

PROCESS:

- ACID THEN DISSOLVED THE D.A.T.A, D.T.T.A. INTO THE VESSEL
- [redacted] SOLUTION IS PUMPED INTO METHANOL OR WATER TO PRODUCE DIFFERENT COLORS

STARTING IN 1979
- ALL EFFLUENT IS SENT TO [redacted] P.O.T.W. (PASSAIC VALLEY)
- TREATMENT FACILITY ON SITE IS PERMITTED BY [redacted] PASSAIC [redacted] VALLEY TO ADJUST [redacted] THE PH BALANCE
- USE A LIQUID BASE CAUSTIC SODA TO ADJUST THE PH

STARTING IN 1981 OR 82
OUTSIDE FIRM ⇒ INDUSTRIAL SOLVENTS + CHEM
- DISTILL OFF METHANOL (BY OUTSIDE COMPANY) SO THAN NO ADJUSTMENT WAS THEN NEEDED FOR DISCHARGE TO P.O.T.W.

- FILED A PART A PERMIT TO BE A T.S.D.

THIS CONTINUED UNTIL 1986

- E.P.A. WANTED PART B
- SUN DECIDED TO FILE FOR GENERATOR ONLY STATUS
- IN 1986 (APPROX.) SUN CHEM. WENT BACK TO TREATING THEIR OWN WASTES BECAUSE INDUSTRIAL SOLVENTS + CHEM WASN'T ECONOMICALLY SOUND.

- STARTING IN 1988 SUN CHEM DECIDED TO DISTILL THEIR OWN METHANOL AND REUSE THE METHANOL IN THEIR PROCESSES.

- THIS WENT ON-LINE IN 1989 (JULY)

- PHOSPHORIC ACID IS PH ADJUSTED ON-SITE AND SENT TO [redacted] PASSAIC VALLEY SEWAGE AUTHORITY

- TANK USED TO STORE PHOSPHORIC ACID AND WATER MIXTURE
  - BUILT IN 1982
  - STAINLESS STEEL
  - 10,000 GAL

- SEND TO POTW AND AVERAGE OF 100,000 GALLONS PER DAY. 99% WATER

- MONITOR OCPSF ONCE PER MONTH AND CONTINUALLY FOR PH.

- PRESS WASHINGS ARE ALSO AN EFFLUENT TO THE P.O.T.W.

- ONCE PER WEEK SYSTEM IS MONITORED FOR B.O.D.

DISTRIBUTION

- 55 GALLON DRUMS OF WET LIQUID
- DRY PRODUCT IS SENT IN 30 GALLON PLASTIC, STEEL DRUMS TO SISTER PLANT IN STATEN ISLAND

DRYING

- WET PRODUCT IS DRIED BY AN INDUSTRIAL OVEN. REGULATED BY A CATALYTIC UNIT. STARTING IN 1988
- CATALYTIC UNIT IS AN INCINERATOR THAT IS PERMITTED

- SEVERAL PERMITS THROUGHOUT THE SITE BY NEW JERSEY.

STORAGE TANKS

- 5 STORAGE TANKS
  - PHOSPHORIC ACID
  - PURCHASED METHANOL
  - RECOVERED METHANOL
  - EFFLUENT USED IN RECOVERING METHANOL
  - CAUSTIC SODA USED IN NEUTRALIZING WASTEWATER
- ALL DIKED AND CONTAINED

3/25/92 SUN 010

EFFLUENT

- 5,000 GALLONS OF EFFLUENT PER DAY
- 2,000 - 3,000 GALS. OF METHANOL COLLECTED OFF THAT EFFLUENT EVERY DAY
- WASTEWATER DISCHARGE IS ONLY INDUSTRIAL
- SANITARY DISCHARGE IS SEPARATE PERMIT AND SYSTEM

3/25/92 SUN 011

- NON-CONTACT COOLING WATER IS REUSED

SHIPMENT OF DRUMS

- OVER THE LAST 10 YEARS 20 DRUMS (55 GAL) OF WASTE OIL HAVE BEEN SHIPPED OFF-SITE TO A RECLAIMER
- SOON OIL USED ON-SITE WILL NOT HAVE TO BE SHIPPED OUT AS IT IS NOT HAZARDOUS IN NEW JERSEY.

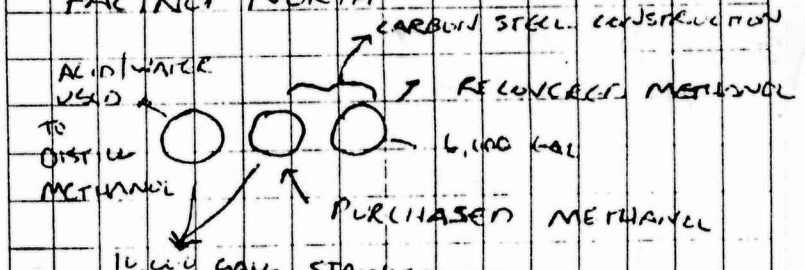
- USED TO MAKE A PRODUCT USING A FINAL STEP WITH ACETIC ACID. NO LONGER USING THIS PROCESS OR ACETIC ACID. PROCESS STOPPED IN 1986 OR 1987.

OLD PROCESSES
- ISOPROPYL ALCOHOL
- ETHYNOL

* BOTH CHEMICALS WERE USED IN THE PROCESS IN THE PAST. NOW METHANOL IS SUBSTITUTED FOR BOTH.

1010 TOUR AND INSPECTION

FACING NORTH



RHOTO 1-1

- ABOVE GROUND STORAGE TANKS (3 OR 5)
- FACING NORTH
- OUTSIDE MAIN ADMIN BUILDING

PHOTO 1-2

- FACING WEST
- METHANOL DISTILLATION AREA
- OUTSIDE MAIN ADMIN BUILDING

PHOTO 1-3

- METHANOL DISTILLING AREA

  LEFT: RECOVERED METHANOL

  RIGHT: EFFLUENT USED TO DISTILL MATERIAL

- FACING SOUTHWEST

TOTAL OUTPUT

2,500 - 3,000 LBS.

PHOTO 1-4

- WASTE WATER OUTFLOW AREA

  LEFT BIN: TO DISTILLER
  RIGHT BIN: TO W.W.T.

- FACING SOUTH
- PROCESS BUILDING

3/25/92 SUN 016

PHOTO 1-5

- WATER DRAINAGE TO W.W.T
- FACING SOUTH
- PROCESS BUILDING

PHOTO 1-6

- INCINERATOR
- FACING SOUTH
- ROOF OF MAIN PROCESS BUILDING

3/25/92 SUN 017

PHOTO 1-7

2 TANKS (1 HIDDEN)

- STAINLESS STEEL WASTEWATER TREATMENT (OR NEUTRALIZATION) TANKS (TOP)
- FACING NORTHEAST
- OUTSIDE PROCESS BUILDING

PHOTO 1-8

- FOUNDATION OF NEUTRALIZATION TANKS
- FACING NORTHEAST
- OUTSIDE PROCESS BLDG.

1115 RETURN INSIDE

OLD STORAGE TANK

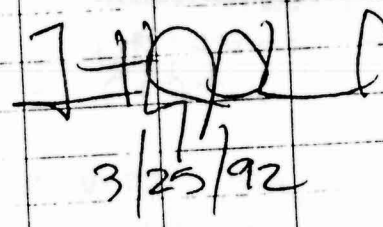
- ONE FIBERGLASS TANK WAS CLOSED AND TAKEN AWAY
- CLOSURE PLAN FOR THE TANK WAS [redacted] DEVELOPED [redacted] BY THE FACILITY

1130 FINAL STATEMENT

SWMUs

1) METHANOL / PHOSPHORIC ACID [redacted] TANK
2) FORMER METHANOL / PHOSPHORIC ACID TANK
3) DISTILLATION UNIT FEED TANK
4) DISTILLATION UNIT BOTTOMS TANK (WASTE ACID)
5) WASTEWATER COLLECTION AND TREATMENT SYSTEM
6) CATALYTIC INCINERATOR
7) DISTILLATION UNIT

3/25/92 SUN 020



3/25/92

3/25/92 SUN 021